

Abstract

The jacket surface of the piezoelectric actor body (1) is surrounded by an injector housing (9), maintaining an intermediate space and is cooled by direct contact with an inert fluid which does not conduct electricity (6), forming a fluid space in the injector housing (9) which is filled with fluid except for an air reservoir (7). The volume of the air reservoir (7) is at least large enough to allow the thermal expansion of the heat coupling fluid (6) which occurs at the highest operating temperature of the actor body (1).